

# DIGITAL EMPOWERMENT AND EQUALITY IN INDIA

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by

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## ABSTRACT

This thesis examines the newfound digital empowerment of disadvantaged youth in India. Currently, the digital divide prevents many of the poor in India from participating as equals within Indian society. Throughout India, several programs meant to foster economic development through digital literacy work to bridge the digital divide. Looking at the Pratham InfoTech Foundation as my prime example, I argue that these purely economic programs are helping to advance equality in India but this is being achieved through digital empowerment and not with economic development. The ability of the poor to now harness the power of technology, especially through the Internet and social media, means that the digital realm is no longer the exclusive domain of the urban elite. Insight into how this may impact Indian society may be gained from exploring the ways in which the urban elite use digital media today. As the poor become more adept at utilizing digital resources to suit their own needs, I conclude that this newfound digital equality will eventually translate into greater equality and participation within Indian public life.

## BIOGRAPHICAL SKETCH

Jerry Joseph Benjamin is originally from Kerala, India. He moved to the United States at a young age, where he grew up in New Brunswick, New Jersey. Jerry did his undergraduate work at Rutgers University where he earned a BA in Anthropology. After graduating from Cornell University with an MA in the field of Asian Studies, he hopes to work in either international or sustainable development on issues related to poverty, healthcare and the environment.

*This thesis is dedicated to my mother Elsy Benjamin with love and appreciation*

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Cornell University and Ithaca are truly gorges; the time I spent here will always be remembered fondly.

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## LIST OF ABBREVIATIONS

CAL – Computer aided learning

ICT – Information and communications technology

IT – Information technology

MCGM - Municipal Corporation of Greater Mumbai

NGO – Non-governmental organization

PIF – Pratham InfoTech Foundation

RS-CIT - Rajasthan State Certificate Course in Information Technology

UNICEF - The United Nations Children's Fund



## SECTION 1

### INTRODUCTION

India will not be able to reach its full potential as a nation unless the many inequalities that currently exist within the country are addressed. One of the ways in which inequality affects Indian society is through the digital divide: the unequal access to and use of technology. Due to digital illiteracy, many of India's poor are at great risk of being left behind in a rapidly changing society. For India to be a successful nation what is needed is inclusive participation of the poor in both the digital and public realms. This participation may have already commenced as many programs that have been working to address the digital divide are starting to bear fruit. The way in which the previously disadvantaged may use their newfound digital empowerment can have a great number of ramifications upon Indian society. By looking at digital empowerment, this thesis argues that the ability of the poor to harness the power of technology to finally participate as equals online will eventually lead to greater equality in Indian public life.

In order to better understand the importance of digital empowerment to India's future, this thesis first looks at the digital divide. Since the digital divide threatens to upend the progress that India has already made, it is of crucial importance to raise the rates of digital literacy across the country. To address the pressing issue of the digital divide, many NGOs (non-governmental organizations) have been working throughout India to find solutions to the root causes of this divide. Often, it is the lack of access to

digital technologies and the poor quality of education within India that exacerbate the digital divide. Pippa Norris best describes the digital divide when she states:

The digital divide is understood as a multidimensional phenomenon encompassing three distinct aspects. The global divide refers to the divergence of Internet access between industrialized and developing societies. The social divide concerns the gap between information rich and poor in each nation. And finally within the online community, the democratic divide signifies the difference between those who do, and do not, use the panoply of digital resources to engage, mobilize, and participate in public life. (Norris 2001, 4)

For India, addressing the digital divide is important because according to Patanjali, “being able to read, write and calculate in today’s complex world is not enough. Skills training, health and environmental education, and computer literacy are increasingly considered part of the literacy endeavor” (Patanjali 2005, 5).

In India, being literate in English was once seen as a pathway to joining the middle-class. Today, this is not enough, as rapid changes in society and heavy reliance on information technology (IT) have made the knowledge of digital literacy crucial. According to the various NGOs that work to address the digital literacy problem, being digitally literate means that one should have knowledge of the computer, the Internet, the mobile phone and various communication tools such as email. Becoming digitally literate is difficult as the massive inequalities that exist within Indian society generally stem from a

lack of economic development. This often results in limited resources, which in turn limits access to new technologies for those who are disadvantaged. According to the Internet and Mobile Association of India, the number of Internet users was “estimated to reach 213 Million by December 2013” (Internet and Mobile Association of India). These users overwhelmingly tend to be urban, middle-class, college educated males, which leaves the vast majority of Indians without access and without a voice. Not being able to interact with and learn about these new technologies is robbing millions of Indians the chance of joining the new global economy, limiting social mobility and further exacerbating the divides that already exist in Indian society. Even when there is access to these technologies, there are often a myriad number of other issues that contribute to the perpetual state of inequality. For example, the majority of Indian children today are enrolled in some form of schooling but the quality of education for disadvantaged youth is lacking. In many instances, schools are unable to adequately prepare children for a digital future and NGOs such as the Pratham InfoTech Foundation exist to fill this gap by addressing these inequalities.

The Pratham InfoTech Foundation has been working to raise the digital literacy rates of the urban poor in India since 2000. Attempts to confront inequality in India are often economic in nature as the focus is on how best to raise the masses out of poverty and into the middle-class. This holds true for Pratham InfoTech and other similar programs. With an outreach in 10 states and 34 cities within India, the goal of Pratham InfoTech is “to bridge the digital divide, facilitate the adoption of information technologies (IT) in

education, and equip disadvantaged youths with skills, tools and capabilities that the new global economy demands” (Pratham InfoTech Foundation).

These programs are purely economic in nature because while their main focus is to bridge the digital divide, this is done so as to provide opportunities for the newly digitally literate to attain gainful employment in the future. The success or failure of these programs in confronting and lessening inequalities in India are therefore measured with an economic frame of mind. Success can be defined as a disadvantaged youth bridging the digital divide and using their newly developed skills in information technologies to join the so called new global economy.

However, an argument can be made that economic benefits to disadvantaged youths are not the only way to measure success. There are other factors that should be taken into consideration when discussing inequality in India and the digital divide. How the newly digitally literate are using technologies such as the computer and mobile phone outside of what programs such as Pratham InfoTech originally intended is an equally important and interesting area to explore. Pratham InfoTech and similar programs, which were originally intended to be for economic betterment and upward mobility may have wide-ranging socio-cultural impacts on Indian society and therefore on inequality in India. This is due to how the previously disadvantaged youth are now using their newfound digital literacy and how they may use it in the future. By looking at Pratham InfoTech at the micro level and then by looking at Indian society at the macro level these trends will be explored.

What is happening in India today is that the computer, the mobile phone and associated technologies are no longer the exclusive domain of the urban middle-class or the college educated. The previously disenfranchised are now joining these privileged ranks by using technologies once denied to them in both unique ways and in ways that mirror trends in Indian society as a whole. Digital literacy is now being used by those that were previously excluded from these areas to access social media such as Facebook and Twitter. These platforms are being used to access information online, express opinions and incite change. These youth are in the process of becoming digital citizens. A digital citizen is defined as "those who use the Internet regularly and effectively" (Mossberger et al. 2008, 1). What is happening in India at this very moment is a new type of social equality as the digital divide between the rich and poor is rapidly narrowing and the "democratic divide" (Norris 2001, 4) is being addressed. Kumar writes, the "spread of the Internet and its implications on society is of crucial importance given the strength this technological tool is gaining with each passing day" (Kumar 2006, 6). This thesis argues that Indian society is in the midst of change as empowerment or rather digital empowerment is taking place by the way that the newly digitally literate are harnessing the power of technology to gain an equal voice online which will go on to affect equality in Indian society as a whole. In the future, the growing number of disadvantaged users of digital media will be better able to address the topics that are important to them. The ability to access information or resources online and connect with their peers will empower the poor. The growing use of digital media will allow the poor to

fight caste discrimination, access educational tools or even combat sexual harassment. These are just a few examples of how a greater participation in the digital realm will allow the poor to gain a better standard of living in the public realm. As Ghosh writes, the “spread of education and the availability of mass media have made people aware of their basic rights and entitlements” (Ghosh 2006, 264). The ability to now use digital media as the urban elite will allow the previously disenfranchised to “fully participate in public life” (Norris 2001, 4).

This thesis begins with a look at the methodology used to gather data in support of the thesis. The next section details the digital divide in India by looking at why the digital divide exists and its impact upon Indian society. The importance of content and access, along with how the poor quality of education is a barrier to the eradication of the divide are also discussed. Next, my analysis of programs that exist to combat this issue, specifically the Pratham InfoTech Foundation will be presented. By using primary data such as interviews and participant observation conducted in Jaipur, from December 2013 to January 2014, and secondary data such as a review of the literature, I argue that there exists a socio-cultural aspect to these purely economic programs. These programs are indeed helping to address inequality in India. However, this is accomplished with digital empowerment rather than economic development. Digital literacy is helping the previously disenfranchised to harness the power of technology to gain a more equal voice online and within Indian society. This digital empowerment will have great

ramifications upon Indian society as it finally allows the previously disenfranchised to participate as equals in both the digital and public spheres.

## SECTION II

### METHODOLOGY

This thesis is an exploration of the socio-cultural impact of a program that is meant for economic development. Due to the negative consequences of the digital divide upon India with regards to economic matters many of its citizens are not able to fully realize the benefits of economic development. Many NGOs, like the Pratham InfoTech Foundation, have created programs to address these shortcomings. This section discusses the qualitative methods used to gather data to support the thesis. The first part of this section looks at the overall methodology used for data collection. The next part describes the types of sources that were employed to support the argument. The last part of this section discusses potential limitations for this thesis.

#### Research Paradigm

Research for this thesis was conducted through a review of the literature on the issue of the digital divide in India. Qualitative research in the form of fieldwork through informal interviews, group discussions and direct observation of the student teachers at Pratham InfoTech was used to show digital empowerment. A literature review can be explained as a “written appraisal of what is already known - existing knowledge on a topic” (Jesson et al. 2011, 10). For the purposes of this thesis a more fitting description is when Jesson paraphrases Blumberg who states that an academic document “is an appropriate summary of previous work. But it needs an added dimension - your interpretation” (Jesson et al. 2011, 11). That dimension emerges from the



qualitative research method. A basic definition of the qualitative research method is the “study [of] things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them” (Denzin et al. 2011, 3). Qualitative research can include participant observation, interviews, an analysis of relevant materials and many other forms of information gathering methods. Information gathered on the digital divide at Cornell University and in India by fieldwork in Jaipur, Rajasthan through observation and interviews helped to understand the importance of digital literacy and the empowerment that it brings to the students of the Pratham InfoTech Foundation.

#### Data Sources and Analysis

The Pratham InfoTech Foundation works in 10 states and 34 cities within India (Pratham InfoTech Foundation). Data for this thesis on the emergence of digital empowerment was collected through fieldwork conducted as an intern at the Jaipur, Rajasthan office in December 2013 and January 2014. Data on the digital divide in India, digital literacy and further evidence of digital empowerment was compiled through independent research of relevant literature available through the Cornell University Library system. Academic search engines and relevant websites via the Internet were also crucial in compiling data. Analysis of the gathered data was then used to support the argument that Indian society is in the midst of change as empowerment or rather digital empowerment is taking place by the way that the newly digitally literate are harnessing the power of technology to gain an equal voice online which will go on to affect equality in Indian society as a

whole.

### Limitations

While the research conducted in Jaipur, Rajasthan and at Cornell University have been helpful in compiling data to support the argument for emerging digital empowerment in India, there are still some limitations. One such limitation was the lack of relevant academic materials concerning some topics within India such as the 2014 general elections or the use of social media due to the fact that these are current events. Academic sources will come to exist in time but for the purposes of this thesis, I relied on reputable online newspapers and websites. Another limitation was that due to time and financial restraints, I was only able to work directly with one NGO in India and therefore the sample size is small. This is not necessarily a flaw as data compiled through independent research at the Cornell University Library, on similar NGOs and through the Internet have helped to support the thesis.

### SECTION III

#### THE DIGITAL DIVIDE IN INDIA

The purpose of this section is to explore the digital divide in India. The digital divide in India is a paradox because while India is a leader in information technology, many of its citizens have never experienced the benefits of digital technology. For the poor in India, a lack of economic opportunity prevents many from being able to bridge the digital divide. There are many in India today that believe the future economic growth of the country will be driven through the strength of its information technology sector. The inability to bridge the digital divide, will render this economic growth moot. A lack of access, a lack of content and the poor quality of education within Indian schools all contribute to the digital divide.

#### The Digital Divide

In the midst of the recent 2014 elections in India, *The Guardian*, a prominent British newspaper, formed a panel of experts that examined the state of inequality within the country in “13 ways to tackle inequality in India” (Young). Arun Kumar, a state team leader with Futures Group International, was of the opinion that this can be done by harnessing the power of technology as this “has helped in reducing some of the access barriers in India, particularly in relation to access to information” (Young). Akhil Paul, the director of Sense International India, believed that equality could be achieved by ensuring that India's growth was for the benefit of the many and not only for the few as “India is a place of increasingly stark extremes in wealth. In the

same India where millions use smart phones, millions live in poverty” (Young). Meanwhile, Jayati Ghosh, a professor of economics at Jawaharlal Nehru University, suggests that India should improve the balance of mass media because “the media in India plays a role in sustaining inequality” (Young). Finally, Asha Kowtal, the general secretary of the National Campaign on Dalit Human Rights, wished that “all groups and communities could express their voice without fear” (Young). These recommendations on how best to tackle inequality in India may seem to be unrelated but what all of these suggestions have in common is that it is the digital divide in India that is holding back their implementation. The stark extremes in wealth that exist in India are a barrier to success for the majority of its citizens as they are unable to access the power of technology. Without this access to technology, they are unable to make their voice heard since it is only those with access that can fully “engage, mobilize, and participate in public life” (Norris 2001, 4).

Pippa Norris in comparing industrialized and developing societies had described the digital divide in terms of a global, social and democratic divide. As India is still a developing nation, all three aspects of this analysis are present, yet India is also a special case. The digital divide in India is unique as the nation has earned world renown for its information technology sector and is home to Bangalore, which as Naomi Canton of CNN writes, is “India's Silicon Valley because the city is a hub of technology entrepreneurs and home to some of the world's top global software companies” (Canton). At the same time, a majority of India's citizens have never before used the computer or accessed the Internet. Rao accurately describes this situation as a paradox. Rao

states, “while on one hand, India is applauded for its leadership position in the IT, the paradox of [the] “digital divide” exists. This phenomenon has created a virtual divide between the affluent enjoying the benefits of technology, while the middle-class and lower economic levels do not have similar access to technology” (Rao 2011, 134). The benefits of technology that are enjoyed by the affluent can be thought of in terms of power and choice. The affluent in India are able to dictate and control what is important to them by how they use technology. People who have access to technology are able to obtain the relevant information in an easier and quicker manner. They have an unparalleled access to knowledge that those without cannot compete with. They have the ability to more easily communicate and exchange ideas on a global stage. They have an edge in business as they can potentially sell and buy goods online. They also have the capability to use social media to express opinions and participate in public life in a way that is denied to those without these technologies. If India ever hopes to become an industrialized society, the paradox of the digital divide must be addressed. The use and benefits of digital technology cannot be limited to the few. The root cause of why the digital divide exists becomes clearer when examining India through an economic and developmental standpoint.

Globally and historically, “the root cause of unequal global diffusion of digital technologies is a lack of economic development, the same as the reasons for the uneven spread of old mass media like radio and television” (Kumar 2006, 69). India is not any different with regards to the lack of development faced by many of its citizens but it may indeed actually have it worse as India has

always been a fractured country in every sense. From caste bias, to issues with religion, to a lack of educational attainment among the populace, to gender gaps and wealth gaps, the divisions present in Indian society are numerous and have tended to benefit the few at the expense of the many. While there are many possible explanations and causes as to why a digital divide can and does exist, looking globally or locally in India, it is the lack of economic development and in some places, unequal economic development that is the main culprit. The compiled data can be bleak at times as “despite the exuberant discourse of emergent India, even conservative World Bank estimates [place] the percentage of India’s 1.15 billion citizens living below the poverty line at 42 percent, while other studies put the figure somewhere between 50 to 77 percent of the overall population” (Chakravartty 2012, 66). In spite of India’s high level of poverty, “the Internet usage in India has gone up with more and more Internet Users using the Internet on a regular basis” (Internet and Mobile Association of India). Much remains to be done though as the number of users was only “estimated to [be] 213 Million” (Internet and Mobile Association of India) at the end of 2013. The growth of the Internet in India is important because with this growth, there comes a changing definition of literacy.

The reason why these Internet statistics are important and why they are the cause of such alarm in India can be attributed to the changing definition of what it means to be literate. Before, being literate had meant knowing how to read, write and conduct arithmetic. Knowledge of the English language also took on a greater importance. After independence, India tried to make Hindi

the unifying lingua franca but protests from states that did not speak Hindi led to English being declared an official associate language along with Hindi. Over time, English became indispensable and the language that was used for official purposes. In India, the people that had knowledge of English in the past like the majority of computer users in India today tended to be urban and much more affluent than the average India. As “it is widely believed that there are sizable economic returns to English-language skills in India” (Azam et al. 2013, 335), the desire to study English was particularly strong among the lower social classes. For those that were fortunate enough to have attended an English medium school, having a working knowledge of English was seen as a pathway to joining the middle-class. Patanjali writes, “in a highly literate society, it is likely that an illiterate individual may find it very difficult to function optimally without minimal functional literacy skills” (Patanjali 2005, 65). In an Indian society that now values and relies on information technologies it is very difficult for those without minimal functional digital literacy skills to function optimally. In the India of today “information technology is now seen as an engine of economic growth. The lead that the Indian software industry has taken has further reinforced the belief that if channeled properly, information technology can promote economic and social growth” (Duggal 2003, 62-63). Throughout India, there exists the belief that technology can promote economic and social growth but it is important to keep in mind that it is only through inclusive growth that India can realize its true potential. This inclusiveness does not currently exist within India since the users of information technology are still almost exclusively urban, middle-

class, college educated males. Therefore, it can be said that information technology is not being channeled properly as millions of Indians, if not the majority of the population, are still being denied equal access. The inability of the nation to address these problems in an adequate manner has lead to a further stratification of Indian society, which is already heavily burdened by the divide between the “haves” and the “have-nots”. These problems are being addressed and the digital divide is being bridged slowly, albeit issues of access and content are still areas of major concern.

Content, access and the digital divide are all interrelated. It is important to remember that the “digital divide is first and foremost an issue of accessibility” (Kumar 2006, 2). The word access has already been previously highlighted as statistics on Internet penetration and the divide that exists due to a lack of economic development has lead to exclusive economic growth, rather than the desired inclusive growth. What happens though when some of those that were previously excluded due to limited resources are somehow able to bypass the access barrier and bridge the digital divide? Oftentimes what is experienced by these few is what is called a content gap. Manzar, describes this gap as “the creation and usage of content and services [which] have not been able to follow the impressive and relentless pace of innovation and spread of technology, opening what is called the content gap” (Manzar et al. 2009, 19). This content gap is of importance to India due to the current composition of the majority of computer users within the nation. As stated earlier, the profile of Internet users in India today is disproportionately male, urban, affluent and college-educated. The new users of these technologies are



coming from rural areas or from the slum areas of sprawling urban centers. The majority of the content and services that is available online has been geared specifically for the older and wealthier type of user and there is rarely anything relevant that can be used by the newer users. These different social groups have differing needs that are not being adequately addressed by the content available today. Even when there is readily available content or services, oftentimes they may be of a lesser quality or in the English language, rather than the local language. My own experiences in Jaipur gave me some insight into the relationship between content, access and the digital divide. Unlike the urban elite who are the primary users of information technology today, the students at Pratham InfoTech are mainly young, female and Muslim. Although they were taking computer courses and learning English, they were still relatively inexperienced in both. The students needed information and resources on the topics that were important to them but this was not always available. For example, some students used Pratham InfoTech as a tutoring service to enhance what they had learned in school. The students' inability to adequately use the computer coupled with their lack of knowledge in English prevented them from accessing many resources online. Kumar sums up the relationship between access and content and the newly placed value upon the relevant type of content and services needed when stating, "the raging debate over digital divide initially focused on the basic issue of access to IT, then content relevance came to be recognized as perhaps even more important than accessibility as the tremendous impact of IT on every aspect of the society become more apparent and pronounced" (Kumar

2006, 2-3). The interplay between access, content and the digital divide and the problems associated with them are also present within the Indian educational system and its schools.

Since Independence, India has made great strides to ensure that a majority of its school-age children attend school. The issue with the educational system in India is not so much about access to these schools but rather it is about the quality of these schools. Ramachandran addresses this important point directly by writing, “a well functioning and attractive school, with basic facilities and motivated teachers, makes a major difference in the lives of poor children. Access and quality have thus to be seen as being part of the same continuum – one without the other is meaningless” (Ramachandran et al. 2003, 5001). In trying to address the issue of literacy with regards to improving reading, writing and arithmetic rates, many schools were overburdened and suffered from overcrowding, lack of resources and an inadequate supply of qualified teachers. Now that the definition of literacy has been expanded to include digital literacy due to the increased importance placed upon information technologies, schools that were already stressed simply cannot cope. Many schools just do not have the space, knowledge, money or connectivity to properly teach about the computer. The strides that India has made since Independence and its future potential are threatened, as the possibility exists that India may not be able to catch up to the industrialized world. Tiene highlights this danger by writing:

Digital technologies provide exciting new opportunities for students in the industrialized world to obtain large amounts of current information

on almost any topic, to communicate their thoughts in dynamic new ways, and to work more efficiently than ever before possible. Without access to the benefits of ICT, students in less developed countries may fall even further behind their peers in other nations. (Tiene 2002, 211-212)

The inability of India to capitalize upon these opportunities due to the poor quality of its schools will only serve to hurt its future growth potential.

There are many in India today that like to highlight the nation's numerous successes but they also tend to sometimes overlook its shortcomings. There are those that argue that Indians "are living in a knowledge society; a society which devotes its intellectual and technological capital towards its own future development" (Bhattacharya 2007, 544) but in reality, the digital divide is holding back this future development. An examination of inequality in India and the digital divide has exposed the deep complexities that underlie this issue. To clarify, the digital divide in an Indian context has been described as presenting itself as an issue of inequality for the majority of Indians, which stems mainly from a lack of economic development. The lack of development is harmful because India now places great importance and value upon its digital and information technology sectors in the belief that they will drive economic growth. For this growth to take place there needs to be greater inclusion of all members of Indian society as access and knowledge of these technologies is currently limited to the urban, college-educated, upper-classes. Inclusion of the other sections of Indian society is difficult as "poor and minority families and their children

have less access to a range of resources in society. Thus is it not surprising to discover that the same pattern applies in the case of the emerging digital infrastructure represented in [the] home, school, and workplace” (Natriello 2001, 260). Attempts to better address these harmful recurring patterns in Indian society have been pursued within the school system with limited success. A lack of access, a lack of appropriate content and useful services coupled with the poor quality of the schools have made bridging the digital divide extremely difficult for India. Due to the lack of progress in bridging the digital divide, many NGOs such as the Pratham InfoTech Foundation have been created and tasked with finding solutions to these problems by providing quality education as a means of bridging the divide to induce economic development.

## SECTION IV

### THE PRATHAM INFOTECH FOUNDATION

The Pratham InfoTech Foundation first started out as a part of the Pratham Mumbai Education Initiative. The Initiative was created in 1994 in conjunction with UNICEF and the “Municipal Corporation of Greater Mumbai (MCGM) to achieve universal primary and pre-primary education in Mumbai by [the year] 2000” (Pratham InfoTech Foundation). Computer competency was a part of this initiative and 15 IT centers in Mumbai were created with the hope that digital literacy rates would be increased through computer aided learning (CAL). By 2000, Pratham InfoTech had become its own separate entity. 14 years later, Pratham InfoTech now has a reach in 10 states and 34 cities with over 450 IT centers designed to serve the needs of underserved areas (Pratham InfoTech Foundation).

Pratham InfoTech’s views stem from the belief that while “advances in IT have brought tremendous growth and benefits to our generation, these benefits are not reaching all equally” (Pratham InfoTech Foundation). The previous section on the digital divide has validated these views as it has been suggested that many in India are not able to enjoy the benefits of technology due to limited resources, a lack of access and the poor quality of education in matters related to the computer. The inability to gather information and resources online or communicate globally through email has threatened to leave many of the disadvantaged in India further behind. In working to provide disadvantaged youth an e-education by trying to improve their

digital literacy, Pratham InfoTech is actually trying to eradicate poverty. The importance of this work cannot be overstated, as “in the developing countries, raising literacy and education levels should be viewed as the principal instrument of poverty eradication” (Patanjali 2005, 242). Working with those at the greatest risk of being left behind is a noble pursuit but comes with great risk as “research shows that efforts to promote digital literacy and professional capacity-building can fail among populations where educational attainment is low, interest is low, and where there is little or no supportive social networks or relevant content to reinforce learning” (Figueiredo 2012, 6). Pratham InfoTech’s operations and approach have been tailored to avoid these pitfalls.

In order to reach those at the most risk of being left behind in the new global economy, special emphasis is placed on Computer Aided Learning. The disadvantaged youth that are the focus of these programs are between the ages of 5 to 21. In order to provide the proper “skills, tools and capabilities that the new global economy demands” (Pratham InfoTech Foundation) computer courses on important programs and applications are taught. The lengths of these courses are generally between three to six months long. Introduction to Microsoft Office and Photoshop are some examples of the courses offered. Basic digital literacy skills such as how to conduct a search online and how to send e-mail are also emphasized. Courses were created so as to mimic what a potential employee might encounter in workplaces the world over. As most of these students have never before seen or used a computer, competency based educational computer games (Pratham InfoTech

Foundation) are usually the first step in teaching digital literacy. Computer games are supposed to make learning fun and “computer and video games can change education because computers now make it possible to learn on a massive scale by doing the things that people do in the world outside of school” (Shaffer 2006, 9). Based on age and experience, printed materials are additionally given as a means to further develop digital literacy and other IT skills. Besides instruction on the computer, tutoring on subjects such as Arithmetic and English are also provided so as to bolster the students’ chances of finding gainful employment.

Pratham InfoTech also “relies on recruiting smart, talented youth from the underserved communities” (Pratham InfoTech Foundation) to act as a bridge between the NGO and the communities they serve. This is important, as it has long been known that “without active participation of the beneficiary community, development is not possible” (Devasia 1994, 56). Through informal interviews with the student teachers at the Jaipur center, I found out that this active participation takes place when they first come to the center as students to learn about the computer. Then, after their course of study is finished, many are recruited to stay on to become student teachers to teach new students. It is the community that benefits here as members who are themselves invested within the community are now teaching other disadvantaged youth.

Time limitations made it impossible for me to determine if the Pratham InfoTech Foundation was successful in imparting the necessary “skills, tools and capabilities that the new global economy demands” (Pratham InfoTech

Foundation). However, my interactions with the student teachers in Jaipur through participant observation and informal interviews allowed me to witness firsthand the other ways in which they were using their newfound digital literacy. What was taking place was the narrowing of the social and digital divide as digital resources were being used “to engage, mobilize, and participate in public life” (Norris 2001, 4) or in this case, digital life. This was done by the students’ usage of such applications as Facebook, YouTube and Twitter. As many of these student teachers had never before used the computer, they were experiencing digital and potential political empowerment for the first time. The digital domain is therefore no longer the exclusive domain of the urban elite. Those who were previously underserved and disadvantaged were now harnessing the power of technology to express what was important to them. By being able to now articulate opinions, access information and choose what is relevant to them all online as the privileged classes before them had done, these youths are now able to participate as equals in the digital sphere which will eventually translate to greater equality in the public sphere.



## SECTION V

### DIGITAL EMPOWERMENT IN INDIA

The previous sections discussed the digital divide in India and programs that have been developed as a means to address this divide. In order to better understand how these student teachers are harnessing the power of technology for their own benefit, this section starts off with a short biographical description of the participants. Next, different technologies and social media applications will be discussed individually to highlight their importance in India today. Since these technologies had previously been the exclusive domain of the urban, college-educated elite, it will be important to show how this social group uses these technologies to impact Indian society. This will then be compared with the ways in which the newly digitally literate are also using the same technologies. As these previously disadvantaged youth are now able to use the same technologies as the urban elite in India, they are participating as equals in the digital sphere for the first time. I go on to suggest that in the future this digital empowerment will translate to greater equality and inclusiveness in the public sphere.

#### Participants' Background

Although my field research was based in Jaipur, the Pratham InfoTech Foundation is a broad organization with locations all over India. As such, they work with many diverse groups with regards to religion, caste and economic status. What all of these groups have in common is that they are at risk of being left behind due to the digital divide. The Jaipur location is based in the

Ghat Gate area of the old city. Since the Ghat Gate area is located in a Muslim slum, many of the students at the Jaipur branch are Muslim youth. Generally, the student teachers that I observed and held informal interviews with all fell within the same demographic profile. The student teachers were mainly young Muslim women between the ages of 17 to 22 who lived in or around the Ghat Gate area. Many wished to study for the RS-CIT (Rajasthan State Certificate Course in Information Technology) examination with the hopes of one day obtaining employment in either the private or public sectors. This examination, as expected, requires one to have prior knowledge in the areas of information technology. Although they were all in secondary school at the time, the poor quality of education in subjects related to the computer in the local schools made this impossible. Therefore, in order to better understand the computer and related technologies they turned to the Pratham InfoTech Foundation. This was done with the hope that the courses taken there would give them a greater chance in obtaining the coveted RS-CIT. As stated in the previous section, since they had not yet taken the RS-CIT examination, the success of Pratham InfoTech in helping these youth to achieve their goals is an unknown.

On average, their courses lasted 3 months, with some of the longer ones being 6 months. As most students had never before interacted with the computer, courses started off as basic introductory classes. These courses then became more advanced as the students gained competency with the subject matter. As the students started to develop their digital literacy skills, many were recruited to become student teachers. They were still taking courses but

were now also teaching the newer generation of students. For students unfamiliar with computer technology, learning the new subject matter can be a formidable challenge. Having older students teaching the newer students was thought to help the learning process. As the student teachers were once in the place of the newer students, they were better able to help them along in their development. As both groups were also from the same community, the newer students had positive role models that they could admire. If someone from their community had made it, why couldn't they? The consensus among the student teachers was that this was important and necessary work as it was their own community that they were educating.

Outside of the classroom, it was equally fascinating to see how these student teachers were using the computer, the mobile phone and related technologies. Since most of the student teachers had never interacted with an American before, they were eager to learn about the similarities and differences between Indian and American life. Due to the age of the student teachers involved, many of these conversations were on culture, politics and music. I was curious as to how they were so knowledgeable on these topics. Through continued discussion it was discovered that most students had social media accounts on Facebook or Twitter. They were listening to popular music through websites such as YouTube. They were also using the Internet to gather information that was relevant to them. In essence, they were becoming digital citizens as they were using digital technology like many people around the world. In order to understand the significance of this, one should remember the idiom of "putting oneself in someone else's shoes". In the span of a few months these

youth had gone from never before using the computer to harnessing the power of technology to make their voice heard in the digital sphere. The digital realm is now no longer the exclusive domain of the urban, college-educated elite. How this may impact Indian society will be explored in the next sections.

### Digital Media

The United Nations Development Programme is of the view that “the Internet and social media, as “low-cost aggregators” of public opinion, are amplifying people’s voices” (Malik 2013, 92). This view only holds true if people have unrestricted access and the requisite know-how to use the Internet and social media. As disadvantaged groups in India are becoming digitally literate, what is concurrently happening is a rise in the usage of social media platforms. Social media can present itself in a variety of formats. Blogging, Wikipedia and YouTube are some well-known examples. In India, Facebook and Twitter are two of the more popular social media platforms. Facebook and Twitter as social media platforms in India are increasingly important due to their expanding user base. According to the *Business Standard*, this “growing user base means Facebook’s reach in India now surpasses traditional mass media and is now seven times greater than the largest English daily newspaper, and the largest radio channel” (Business Standard). Moreover, *Bloomberg* finds that India, “Twitter's third-biggest market, is expected to grow 57 percent” (Bloomberg) in 2014. It can be argued that these statistics are insignificant for a nation of over a billion people when it was estimated that in December of 2013 the number of Internet users only

stood at “213 million” (Internet and Mobile Association of India). While it may be true that the low level of Internet penetration within the country limits the voice of many, the number of non-users should not be the primary focus. Rather, the focus should be on the growing user base. Since many in the urban, educated sector already have access to social media, this growth, in part, has to be fueled by other groups. As initiatives to address the digital divide are coming into fruition, it is the students of these programs that are helping to drive this growth. The importance of these figures is made clearer when one sees how the social media platforms are used in India today.

Indian society is plagued by many inequalities and the realm of social media is no exception. This thesis has stressed the fact that the use of digital technologies has been mainly limited to the urban, college educated elite. Their usage of these technologies has presented itself as a form of youth empowerment as it has been used to raise awareness, protest rape and has even influenced the recent general election of 2014. One example of youth empowerment through social media was the reaction to the 2006 film *Rang De Basanti*. One of the ways in which *Rang De Basanti* struck a cord with the urban elite was by “bloggers calling attention to the lack of basic public services (like housing, health, sanitation, education etc) in India and demanding better facilities for the same from the government after being inspired by the characters from the film” (Dilip 2008, 35). The nationwide protests against the infamous 2012 rape in New Delhi is another example of the influence of social media upon Indian society. Outrage against the treatment of women and solidarity with the victim was made possible through social media platforms.

People were given the chance to amplify their voice and ask for change.

Adhvith Dhuddu, the founder of the social media firm Alive Now, described the situation as "an online agitation, people are asking the lawmakers to wake up through these social networks" (Times of India). A more recent example of how social media was used in India can be seen from the 2014 general election. Narendra Modi, the current Prime Minister of India, was able to use Twitter to his advantage by reaching out to those that may have not been inclined to vote for him. As "two-thirds of India's population [are] under 35, Modi targeted the young and smart by topping up campaigning with social media, holograms and recorded voice calls" (Reuters). These examples show that the urban elite have been successful in turning social media platforms into tools of empowerment. The ways in which the newly digitally literate are also starting to use social media platforms may mirror these trends in the future. These trends will be further explored under "Bridging the Digital Divide".

In describing the mindset of the new users of social media in India, Peter Savodnik writes, "they are eager to connect with anyone they find interesting or that has something in common [with them] anywhere around the world" (Bloomberg Businessweek). The student teachers embodied this sentiment by using social media in the ways that appealed to them. Some of the ways that this was done was by listening to Western music on YouTube, following the Manchester United Football Club and keeping in touch with friends through Facebook. Although digital literacy is a new concept to these student teachers, their initial use of the Internet and social media is similar to

the ways in which much of the world uses their digital literacy skills. As the student teachers and other groups like them further develop their digital equality they too will one day be able to use social media as a tool for further empowerment. The stratification of Indian society means that different groups have differing needs. Whether or not the lower classes in Indian society will also use digital media for empowerment is not a question. In time, as more members of these disadvantaged groups become digitally literate they will be able to better address the topics that are important to them as the urban elite already do. The ability to use digital resources “to engage, mobilize, and participate in public life” (Norris 2001, 4) is a pathway to development. Globally, this can be seen “as education levels rise and access to information and communication technologies spreads, people are demanding more participation in political processes, challenging decision makers to be more accountable and expand opportunities for open public discourse” (Malik 2013, 99). As the use of these technologies spread, minority groups within India such as the Hijras, Muslims and Dalits will be better equipped to become engaged citizens. For example, as members of the Dalit community become more educated on their rights, they may be better able to fight the discrimination that they face on a daily basis. In other words, as the members of various disadvantaged groups in India take advantage of their newfound digital literacy they will be able to finally bridge the democratic divide.

### Bridging the Democratic Divide

For India, disadvantaged groups being able to bridge the democratic divide is important because of their potential impact upon Indian society.

Although India is the most populous democracy, many of its citizens do not have an equal say as to the future of their nation. Malik, in talking about democracies, writes, “poor people and poor groups often have limited access to information, voice or public participation. Poor people need to work together to effectively exercise their political voice” (Malik 2013, 103). The ability to organize disadvantaged communities into an effective force can only happen through the access of information. Therefore, it is the ability to access information that will lead to greater public participation as the poor will be able to finally have a say in their future. Hobbs also expresses this sentiment by writing, “to be effective participants in contemporary society, people need to be engaged in the public life of the community, the nation, and the world. They need access to relevant and credible information that helps them make decisions” (Hobbs 2011, 14).

The ability of disadvantaged groups in India to access information through social media and the Internet for the first time may be seen as the beginnings of their participation as effective members of society. We have seen the ways in which the urban, college-educated elite are using digital media for their own benefit. The urban elite have been using digital media to fight for social justice, rile against corruption and ask for improved economic opportunities. The disadvantaged classes in India experience all the same issues and are doubly burdened with their own unique problems. The way in which the urban elite use digital media today offer us some insight as to how the poor may use digital media in the future. Being able to effectively use digital technologies to become a greater participant within Indian society



means that the poor can now fight for the equality and inclusiveness that is currently denied to them. In the future, this greater participation in the digital and public spheres may express itself in a variety of ways. It may be when a poor youth decides to enroll in online classes as a means to one day find better employment. Perhaps it may take place when the women of a lower caste community decide to connect with other women online in order to find strategies to fight sexual harassment. Greater participation might happen when a youth who lives in a slum creates a blog to fight the corruption and discrimination faced by the members of his community. The ways in which digital technologies can help the disadvantaged to gain a better standard of living are innumerable. Digital empowerment in India is about active equal participation both in your own future and in the future of your nation. Schramm puts it best when stating, “knowledge is better than ignorance; health is better than disease; to eat is better than to be hungry; a comfortable standard of living is better than poverty; and to participate actively in one’s nation is better than to be isolated from it” (Schramm 1964, 35).

## SECTION VI

### CONCLUSION

The purpose of this thesis is to explore the digital empowerment of disadvantaged youth in India and the potential ramifications it may have on Indian society. This thesis suggests that the ability of these youth to bridge the digital divide by the use of digital technology for the first time allows for equal participation in the digital sphere. In the future, the continued usage of these technologies by the poor may allow for greater participation and thus equality in the public sphere. The data gathered for this thesis through qualitative research methods and a review of the literature has hopefully provided insight into this phenomenon.

In order to better understand digital empowerment, this thesis first explored the issue of the digital divide. The digital divide is the unequal access to, knowledge of and the ability to use technology that exists between individuals. In India, this divide exists, as the majority of the users of digital technologies tend to overwhelmingly be urban, college-educated and more affluent. Most of India's citizens do not enjoy the same level of knowledge or access to these technologies. Addressing the digital divide in India is crucial due to the growing importance placed upon information technologies within Indian society. It is thought by many that India can rely on information technology to drive future economic growth. However, the future of India as a nation is contingent upon all of its citizens being able to participate as equals both in the digital and public realms. Unfortunately, becoming digitally

literate is difficult as many of the barriers faced by disadvantaged groups often stem from a lack of economic development. In response to these difficulties, programs such as the Pratham InfoTech Foundation work to raise digital literacy rates. Though these programs are meant to be purely economic in nature, there also exists a socio-cultural component.

This thesis argues that the socio-cultural component presents itself through the ways in which the disadvantaged youth are using their newfound digital literacy to become digitally empowered. The youth that were previously disadvantaged are now able to use digital media and the Internet in the same manner as the urban elite. The significance of this event is that the digital domain in India is no longer a segregated or privileged realm. How this may go on to impact Indian society can be envisioned in many ways. This thesis suggests that how the urban elite use social media and the Internet today offers some insight as to how the newly digitally literate may one day also use the same technologies. The urban elite have been using digital media as a pathway to empowerment. By focusing on the issues that are important to them, they have attempted to incite change within Indian society. As the number of poor people who are connected to digital technologies continues to grow, they too will one day be able to agitate for change and disrupt the status quo.

This thesis has examined the digital divide in India and the potential ways in which digital empowerment could change the face of Indian society. While this thesis has mainly focused on disadvantaged youth from Jaipur, the diversity of India makes the digital divide a unique challenge to every

community. Future research into digital empowerment could be undertaken from a feminist, religious, rural, etc standpoint. There are numerous other ways in which this future research could also be undertaken. For example, it would be interesting to find out if actual empowerment of these communities has indeed taken place or if they are still facing the same barriers that have always held the poor from equal participation within Indian society. As digital literacy is often tied to economic development, it may also be interesting to explore if the poor have been able to parley digital literacy into better economic opportunity. The broad research implications of the digital divide and of digital literacy only further highlight its importance to India.

The digital empowerment that is currently taking place in India is about active participation and the chance for the disadvantaged to finally exercise their voice. Romain Rolland once wrote, "if there is one place on the face of the Earth where all the dreams of living men have found a home from the very earliest days when man began the dream of existence, it is India" (Rolland 1931, 21). This sentiment has not always held true but perhaps one day as the poor continue to find their voice, India can be their dream too.

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